









JUL 19 2013

Dr. Peter Goodwin Delta Science Program Delta Stewardship Council 980 Ninth Street, Suite 1450 Sacramento, CA 95814

Subject: Response to the Delta Science Program and Independent Review Panel Report from the 2012 Annual Review Workshop

Dear Dr. Goodwin:

NOAA's National Marine Fisheries Service (NMFS), the U.S. Fish and Wildlife Service (USFWS), and the Bureau of Reclamation (Reclamation), collectively the Federal Agencies, appreciate the Delta Science Program (DSP) and Independent Review Panel's (IRP) participation in the 2012 annual review workshop. The annual review is a critical component of adaptive management within NMFS' reasonable and prudent alternative (RPA) for the 2009 Biological Opinion on the Coordinated Long-term Operations of the Central Valley Project (CVP) and State Water Project (SWP).

In response to the annual review, the IRP provided the DSP with a detailed report on December 1, 2012. Comments and recommendations included in the report were focused on the main annual review agenda items: Clear Creek actions (NMFS RPA actions I.1.1-I.1.6) and the Spring 2012 Delta Operations in lieu of RPA action IV.2.1 per the joint stipulation.

Since then, the Federal Agencies have been working with the technical teams to review the IRP report recommendations and determine appropriate options for implementation. The Agencies are also working together with the DSP on a multi-year strategy for subsequent reviews, developing lessons learned, and incorporating new science.

We appreciate your support of having a more focused annual review agenda. As such, we plan to continue with that approach, in addition to continuing to provide the annual technical team reports for background information. The technical team reports will help

to document the current status of RPA implementation, responsiveness to the IRP's recommendations, as well as provide an opportunity to raise new questions for consideration.

The IRP identified adaptive management follow-through as a critical need for temperature management and habitat restoration on specific Clear Creek NMFS RPA actions. The current approach to temperature management within the CVP/SWP system is to assess resource availability and develop a seasonal objective that can be met with expected operations. Short-term goals are established consistent with the seasonal goals and expected operations. The seasonal goals take into account the entire CVP/SWP system, and actions taken in each watershed are balanced within the system to achieve the seasonal goals. Additional temperature modeling work is expected to commence in 2013 and will provide the Federal Agencies information to help identify additional opportunities and better understand the interconnectedness of the entire system while satisfying season-long temperature management.

Additional IRP comments reiterated the need to explicitly link the success or failure of meeting physical targets identified in the NMFS RPA to the biological/ecological responses of the listed species. Doing this will help focus scientific proposals and studies to better determine adaptive management strategy follow-through, evaluate population responses, refine data gaps and needs, and determine whether actions are benefitting targeted species. This year, the Federal Agencies plan to organize a series of meetings for the purpose of evaluating the need and approach for forming a science and engineering advisory panel for ongoing RPA implementation support. Recommendations will be documented in a Technical Memorandum.

We agree with the IRP's recommendations that there is need for a sound management strategy to verify hypotheses through data collection and monitoring, modeling, analysis of existing temperature data, enhanced communication and data sharing, and controlled experiments. The Federal Agencies will continue to work with the Clear Creek Technical Team, as well as other technical teams representing other CVP/SWP system watersheds, to develop study plan goals and objectives, evaluation of biological responses and consequences, and determining if minor adjustments are warranted.

With regard to the Spring 2012 Delta Operations in lieu of RPA Action IV.2.1 per the joint stipulation, we appreciate the IRP's assessments and recommendations on the proposed analyses for the data that were gathered, and lessons learned for the development of future studies. Given the uncertainties and conflicting findings with the assumptions and different studies and methodologies used to evaluate routing behavior and survival of out-migrating salmonid smolts, NMFS and the California Department of Water Resources are co-leading the South Delta Salmonid Research Collaborative to develop and refine a study plan for Spring 2014 operations.

The Federal Agencies are also committed to continue working through an adaptive management strategy in which goals and objectives are clearly identified and integrated. The Federal Agencies have worked together to put monitoring programs in place and we

will continue to expand monitoring needs, linking the data obtained back to the goals and operational decision-making. Our adaptive management strategy is evolving as actions are being implemented.

Thank you again for your participation in the 2012 annual review. We look forward to reporting on our continued progress of implementing RPA actions in 2013.

If you have any questions regarding this letter, please contact Garwin Yip (NMFS) at (916) 930-3611, or via e-mail at garwin.yip@noaa.gov; Kim Turner (USFWS) at (916) 930-5604, or via e-mail at kim_s_turner@fws.gov; or Traci Michel (Reclamation) at (916) 414-2420, or via e-mail at tmichel@usbr.gov.

Sincerely,

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